

XXXIX.—*The Breeding-grounds of the Rosy Gull.*—Part III.

By S. A. BUTURLIN.

IN my former papers (*suprà*, pp. 131, 333) the breeding-habits of the Rosy Gull (*Rhodostethia rosea*), as observed in the Kolymá delta, were described up to the 10th of July. On the 11th of July I visited one of the colonies near Pokhodskoe. I found on that island some eggs of *Sterna paradisea* (*S. macrura* Naum.), a nest, with two incubated eggs, of *Colymbus arcticus*, and one of *Mergus serrator*. No Rosy Gulls were to be seen on the lake.

On the 13th of July I went from Pokhodskoe northward in a boat, and, while passing some islands of the delta, heard the well-known cry of *Rhodostethia rosea*, but had no time to search for the bird. Several days were passed on one of the northernmost islands of the Kolymá delta ("Kamenny"), where the ground is unfavourable for this species, being a piece of high, rocky tundra. From the 18th to the 20th of July several heavy snowstorms raged, and there was frost at night. In the evening of the 21st of July I was at Ssukharnoe (about $62\frac{1}{2}^{\circ}$ N.), a tiny village on the mainland, near the mouth of the easternmost channel of the Kolymá. The ground there is a high rocky tundra, with mountains rising to 3000 feet, some twelve or fifteen miles off the shore. Near the village a valley (about a mile and a half wide) is formed by a tributary of the Kolymá (the Ssukharnaya), with shallow lakes and swamps. Whilst watching a colony of *Spermophilus* through dense clouds of gnats, I heard once or twice the call of *Rhodostethia rosea*. In the evening of the 22nd I went to the same part of the Ssukharnaya valley, to an island on a lake. Here a nest of *Phalaropus lobatus* was found with four young, some of them fully fledged, though shewing down on the head and neck; also young of *Tringa maculata* and *Phalaropus fulicarius*. There were likewise colonies of *Larus vegæ* and *L. glaucescens* (?) with young in down, but Rosy Gulls were nowhere to be seen: only some shells of their pretty eggs and a wing of a young bird were found near the nest of one of those greedy robbers of the tundra, *Larus vegæ*.

Whilst I was engaged in searching through the island, I suddenly observed three small Gulls flying silently about with uneasy strokes of the wing, in a somewhat owl-like manner, and their silence reminded me of *Xema sabinii* during the spring migration. After a successful right and left shot, the surviving bird became more shy, flying much higher. I missed it once, but after settling several times on the island and on the other side of the lake, the bird (always silent) flew nearer again and was bagged. These were young *Rhodostethia rosea*, easily identified by the form of the tail, and only one was without the remains of down on the head.

I did not realize then that these would be the last Rosy Gulls I was to see alive, but so it was. When back in Pokhodskoe (30th July) I heard from my companion Mr. T. A. Shulga, a botanist, that between the 13th and the 18th of July an odd Rosy Gull was seen two or three times in the neighbourhood (always an adult), and then was lost to view. I visited along with Mr. Shulga all the breeding colonies, even those some fifteen miles distant, but in vain; and one of the oldest local hunters told me that after about the end of July Rosy Gulls are never seen in the Kolymá delta, as they go to sea with their young while they are still in down.

And indeed it must be so. July 11th, when I found one of the colonies deserted, was somewhat early for the young to fly; and should all these swarms of Rosy Gulls migrate to the sea-shore on the wing, my friend Shulga and I, being in different parts of the delta, and every day in the open air, ought to have noticed their migration. Further, on July the 7th, having disturbed a colony of Rosy Gulls with the young in down, I noticed a few hours later that the colony was quite deserted (by Rosy Gulls, but not by *Sterna paradisea*), and that partly swimming, partly on foot, they had gone to the other end of the lake (or rather the chain of swampy lakes), nearly a mile distant.

This exceedingly early northward migration in the half-downy stage of plumage explains why both young and old *Rhodostethia rosea* have been observed during August, or even seen after the middle of July, far away from their breeding-

grounds*. And though the last Polar expedition of the late Baron Toll met with Rosy Gulls near Kotelny Island on the 7th and 8th of August (1902), and at Bennett Island in August 1902 and Sept. 11th, 1901, this only proves to me that the bird does not breed there. The same may be said about Franz-Josef-land, where the Duke of Abruzzi's expedition during one summer in the north, and the Jackson-Harmsworth expedition during three summers in the south of that land, failed to find the bird †, while Dr. Nansen in 1895 met with the first bird only on the 14th of July.

Sandy or pebble-clad beaches, rocky slopes, and high stony tundra of such polar islands as Franz-Josef-land, Novaya Zemlia, Bennett Island, or Wrangell-land, are as unlikely places for the Rosy Gull to breed on as floating ice. During the nesting-season, in June and the early part of July, it is a frequenter of low, *grassy, flat* swamps, on the tundra or even adjoining parts of the taiga.

This bird is said by the natives to breed near Ssredny-Kolymsk ($67^{\circ} 26\frac{1}{2}'$ N.), and a specimen with the wings not fully developed was brought to me there. As it breeds abundantly at v. Malaya on the Alazeya River (just to the south of 68°) ‡, this is quite probable. One of the natives prepared for me some bird-skins near v. Abyi (which lies on a low plain, full of lakes, just to the west of the Indigirka River, about $68\frac{1}{2}^{\circ}$ N., 145° E.); and among them were some skins of *Rhodostethia rosea*, which is, according to this native, a common bird there in the first half of the summer. A nest with eggs was also found by Mr. Rajnowski in the delta of the Indigirka, near Russkoe Ustje (about 70° N. and $149\frac{1}{2}^{\circ}$ E.). Lastly, I obtained in Verkhoyansk ($67^{\circ} 33\frac{1}{2}'$ N., about 133° E.) skins of *Rhodostethia rosea* (along with those of *Xema sabinii*, *Somateria stelleri*, and some others, all in breeding-dress); and was informed that a large flock of Rosy Gulls had

* Cf. Eagle Clarke, 'Ibis,' April 1898, p. 263.

† I may add, that in 1905, when my observations were made, the spring in the Kolymá Basin was somewhat late and the summer unusually cold.

‡ Where no tundra occurs.

visited that place in the spring, but that the case was quite exceptional.

So I think that the Tas-khayakh-tag Mts., a wild and craggy watershed between the Yana and Indigirka basins, must form the western limit of the breeding-ground of the Rosy Gull, as it is also the western limit of *Tringa sakhalina* Vieill., *Colymbus pacificus* Lawr., *Somateria fischeri* Brdt.; and the eastern limit of *Tringa alpina*, *Numenius minutus* Gould, *Pæcile lenensis* Pall. (*obtecta* auct.), and other birds. The southern limit of the Rosy Gull is at about $67\frac{1}{2}^{\circ}$ N., and it has not been met with breeding north of 70° .

Young birds when just killed have blackish-brown eyes and the edges of the eyelids (not prominent) of the same dark colour. The feet are reddish fleshy, with a slight bluish tinge and blackish nails, and with the upper parts of the tarsus swollen (as is usually the case with young waders). The bill is greyish brown, paler on the proximal half and with the base of the mandible flesh-coloured; this pale colouring is only just visible in the older specimens, but extends over two-thirds of the base of the bill in the youngest specimen. The wing is more rounded than in the old bird, the primaries not being yet fully developed, so that the second is longest, the third about five mm. and the first about ten mm. shorter. The tail also is not so cuneate as in the adult, and the central pair of rectrices in the youngest specimen is shorter than the others; nevertheless the form of the tail is plainly cuneate, each inner pair of feathers being somewhat longer, so that the external pair is some 12–17 mm. shorter than the longest of the innermost rectrices.

The young birds are fully feathered, the oldest having no trace of down, and the youngest only traces on the forehead, ear-coverts, and chin. I speak of my Ssukharnoe specimens, but that from Ssredny-Kolymsk has down still adherent, not only on the feathers of the head and neck, but also on those of the thighs and upper tail-coverts.

The first plumage of the Rosy Gull is as follows:—All the under-parts white, strongly tinged on the chest and breast with pale greyish cinnamon-buff, this hue being richer and more

ochreous in the younger specimen, which has the flanks and abdomen similarly tinged. But the oldest bird has the flanks nearly and the abdomen quite without this tinge, and the latter of a somewhat alabaster-roseate hue. The preapical parts of the feathers of the chest and upper breast are somewhat vermiculated with dark greyish brown, these vermiculations being most pronounced in the youngest and scarcely perceptible in the oldest specimen. The lining of the wings is white, edged with brownish.

The upper-parts are dark brown barred with ochreous on the ends of the feathers. These ends are one millim. wide on the crown or neck, while they are nearly confluent on the longer scapulars in the younger bird; in other specimens they are narrower from abrasion. Forehead greyish brown, a long but not well-defined whitish superciliary stripe, a greyish brown spot in front of and below the eye, covering also the ears. On the hind part of the neck of *older specimens* is a scarcely perceptible narrow whitish collar and some white feathers with ochreous ends (and some of them with a dark preapical part) between the shorter scapulars. The lower back and rump differ from the rest of the upper-parts in the extreme narrowness of the ochreous ends of the feathers and, on the rump, in the white on the bases of them being much more developed, the well-marked visible and dark brown parts of the feathers being reduced to a narrow subapical bar. These bars are narrower in older specimens. The brown of the upper-parts is more blackish, and the ochreous bars are less whitish, than in the young of *Xema sabinii*.

Lesser wing-coverts of the foremost and inner half of the wing white, with narrow ochreous tips; secondaries with their larger coverts white (these coverts slightly tinged with ochreous in younger specimens). All the primary-coverts (including the lesser) are blackish-brown, the primaries are white with blackish-brown ends and are tinged with dark blackish-grey near the shaft of the basal half of the feather; these dark colours being more and more developed on the outer primaries and on their outer webs, so that the three outer primaries are practically blackish-brown with the

inner half of the inner web (excluding the end) white. On the fourth primary the white is extended on the outer web, only in its preapical part, about 10 mm. long; thus on the extended wing taken as a whole it looks like a dark zigzag band on a white ground. The ends of the primary-coverts and remiges are ochreous in younger birds. Tail white, with a narrow ochreous tip and a blackish brown apical band, the ends of three central rectrices (or four in the younger bird) being dark for a length of from 20 (on the outer pair) to 40 mm. (on the central pair).

In the Ssredny-Kolymsk specimen, the youngest of all, the three outer primaries are still quite undeveloped and the tail-feathers are of *equal length*.

In all the specimens the shafts of the rectrices are blackish in the dark part, and white in the white part of the feathers.

Old birds require no further description. I need only say that even now, a year after they were killed and skinned, they (at least older males) cannot be described as having the head and neck, with under-parts, rump, and tail *white suffused* with pink, as the pink colouring is so intense, though it has a somewhat salmon-coloured tinge*. The bases of the pearly-grey feathers of the back and scapulars are also roseate. The fat of this bird is nearly as orange as that of *Hematopus ostralegus*.

Wesenberg, Esthonia, Russia,
July 22nd, 1906.

XL.—*On the Birds collected and observed during the Voyage of the 'Valhalla,' R.Y.S., from November 1905 to May 1906.* By MICHAEL J. NICOLL, F.Z.S., M.B.O.U.

(Plate XXI.)

IN the autumn of 1905 Lord Crawford once more most kindly invited me to accompany him as naturalist during

* But the eggs of the bird, I may add, have somewhat faded.